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# PREPARATIONS FOR THE UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT ON THE BASIS OF GENERAL ASSEMBLY RESOLUTION 44/228 AND TAKING INTO ACCOUNT OTHER RELEVANT GENERAL ASSEMBLY RESOLUTIONS: CROSS-SECTORAL ISSUES

## Strengthening the role of major groups

(Section III, Chapters 1 to 9, of Agenda 21)

Text submitted by the Chairman on the basis of negotiations held on document A/CONF.151/PC/100/Add.13

1. Critical to the effective implementation of the objectives, policies and mechanisms agreed to by Governments in all programme areas of Agenda 21 will be the commitment and genuine involvement of all social groups.

2. One of the fundamental prerequisites for the achievement of sustainable development is broad public participation in decision-making. Furthermore, in the more specific context of environment and development, the need for new forms of participation has emerged. This includes the need of individuals, groups and organizations to participate in environmental impact assessment procedures and to know about and participate in decisions, particularly those that potentially affect the communities in which they live and work. Individuals, groups and organizations should have access to information relevant to environment and development held by national authorities, including information on products and activities that have or are likely to have a significant impact on the environment, and information on environmental protection measures.

3. Any policies, definitions or rules affecting access to and participation by non-governmental organizations in the work of United Nations institutions or agencies associated with the implementation of Agenda 21 must apply equally to all major groups.

4. The programme areas set out below address the means for moving towards real social partnership in support of common efforts to build environmental and economic security.

## I. GLOBAL ACTION FOR WOMEN TOWARDS SUSTAINABLE AND EQUITABLE DEVELOPMENT

(Section III, chapter 1, of Agenda 21)

### INTRODUCTION

5. This programme area was prepared on the basis of Preparatory Committee decision 3/5 on women in environment and development in which the Preparatory Committee requested the Secretary-General of the Conference "to ensure that key elements relating to women's critical economic, social and environmental contributions to sustainable development be addressed at the United Nations Conference on Environment and Development as a distinct cross-cutting issue in addition to being mainstreamed in all the substantive work and documentation particularly Agenda 21, the Earth Charter and the Conventions". Other Agenda 21 programmes of special relevance to women include sustainable agriculture and rural development, freshwater resources, combating poverty, education and health. Recommendations from relevant meetings on women in environment and sustainable development also requested by the Preparatory Committee in decision 3/5 are contained in document A/CONF.151/PC/114.

### PROGRAMME AREA

Basis for Action

6. The international community has endorsed several plans of action and conventions for the full, equal and beneficial integration of women in all development activities, in particular the Nairobi Forward-looking Strategies for the Advancement of Women, which emphasize women's participation in national and international ecosystem management and control of environment degradation. Several conventions, including the Convention on the Elimination of All Forms of Discrimination against Women (General Assembly resolution 34/180, annex) and conventions of the International Labour Organisation (ILO) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) have also been adopted to end gender-based discrimination and ensure women access to land and other resources, education and safe and equal employment. Also relevant are the 1990 World Declaration on the Survival, Protection and Development of Children and its Plan of Action (A/45/625, annex). Effective implementation of these programmes will depend on the

active involvement of women in economic and political decision-making and will be critical to the successful implementation of Agenda 21.

Objectives

7. The following objectives are proposed for national Governments:

(a) To implement the Nairobi Forward-looking Strategies for the Advancement of Women, particularly with regard to women's participation in national ecosystem management and control of environment degradation;

(b) To increase the proportion of women decision makers, planners, technical advisers, managers and extension workers in environment and development fields;

(c) To consider developing and issuing by the year 2000 a strategy of changes necessary to eliminate constitutional, legal, administrative, cultural, behavioural, social and economic obstacles to women's full participation in sustainable development and in public life;

(d) To establish by the year 1995, mechanisms at the national, regional and international levels to assess the implementation and impact of development and environment policies and programmes on women and ensure their contributions and benefits;

(e) To assess, review, revise and implement, where appropriate, curriculum and other educational material, with a view to promoting the dissemination to both men and women of gender-relevant knowledge and valuation of women's roles through formal and non-formal education, as well as through training institutions, in collaboration with non-governmental organizations;

(f) To formulate and implement clear government policies and national guidelines, strategies and plans for the achievement of equality in all aspects of society, including the promotion of women's literacy, education, training, nutrition, health and their participation in key decision-making positions and in management of the environment, particularly as it pertains to their access to resources, by facilitating better access to all forms of credit, particularly in the informal sector, taking measures towards ensuring women's access to property rights as well as agricultural inputs and implements;

(g) To implement, as a matter of urgency, in accordance with country-specific conditions, measures to ensure that women and men have the right to decide freely and responsibly the number and spacing of their children and have access to information, education and means, as appropriate, to enable them to exercise this right in keeping with their freedom, dignity and personally held values;

(h) To consider adopting, strengthening and enforcing legislation prohibiting violence against women and take all necessary administrative, social and educational means to eliminate violence against women in all its forms.

Activities

8. Governments should take active steps to implement the following:

(a) Measures to review policies and establish plans to increase the proportion of women involved as decision makers, planners, managers, scientists and technical advisers in the design, development and implementation of policies and programmes for sustainable development;

(b) Measures to strengthen and empower women's bureaux, women's non-governmental organizations and women's groups in enhancing capacity-building for sustainable development;

(c) Measures to eliminate female illiteracy and to expand the enrolment of women and girls in educational institutions promoting the goal of universal access to primary and secondary education for girl children and for women, and increased educational and training opportunities for women and girls in sciences and technology, particularly at the post-secondary level;

(d) Programmes to promote the reduction of the heavy workload of women and girl children at home and outside through the establishment of more and affordable nurseries and kindergartens by Governments, local authorities, employers and other relevant organizations and the sharing of household tasks by men and women on an equal basis; environmentally sound technologies which have been designed, developed and improved in consultation with women; accessible and clean water; efficient fuel supply and adequate sanitation facilities;

(e) Programmes to establish and strengthen preventive and curative health facilities, which include women-centred, women-managed, safe and effective reproductive health care and affordable, accessible, responsible planning of family size and services, as appropriate, in keeping with freedom, dignity and personally held values. Programmes should focus on providing comprehensive health care, including pre-natal care, education and information on health and responsible parenthood, and should provide the opportunity for all women to breastfeed during the first four months (post-partum). Programmes should fully support women's productive and reproductive roles and well-being and pay special attention to the need to provide equal and improved health care for all children and to reduce the risk of maternal and child mortality and sickness;

(f) Programmes to support and strengthen equal employment opportunities and equitable remuneration for women in the formal and informal sectors with adequate economic, political and social support systems and services, including child care, particularly day-care facilities and parental leave, and equal access to credit, land and other natural resources;

(g) Programmes to establish rural banking systems with a view to facilitating and increasing rural women's access to credit as well as agricultural inputs and implements;

(h) Programmes to develop consumer awareness and the active participation of women, emphasizing their crucial role in achieving changes necessary to reduce or eliminate unsustainable patterns of consumption and production [, particularly in industrialized countries] (USA) in order to encourage investment in environmentally sound productive activities and induce environmentally and socially friendly industrial development;

(i) Programmes to eliminate persistent negative images, stereotypes, attitudes and prejudices against women through changes in socialization patterns, the media, advertising, and formal and non-formal education;

(j) Measures to review progress made in these areas and prepare a review and appraisal report which includes recommendations to be submitted to the 1995 world conference on women.

9. Governments are urged to ratify all relevant conventions pertaining to women if they have not already done so. Those that have ratified conventions should enforce and establish legal, constitutional and administrative procedures to transform agreed rights into domestic legislation and adopt measures to implement them in order to strengthen women's legal capacity for full and equal participation in issues and decisions on sustainable development.

10. States parties to the Convention on the Elimination of All Forms of Discrimination against Women should review and suggest amendments to it by the year 2000, with a view to strengthening its elements related to environment and development giving special attention to the issue of access and entitlements to natural resources, technology, creative banking facilities and low-cost housing, and the control of pollution and toxicity in the home and workplace. States Parties should also clarify the extent of the Convention's scope with respect to the issues of environment and development and request the Committee on the Elimination of Discrimination against Women to develop guidelines regarding the nature of reporting such issues, required under particular articles of the Convention.

Areas requiring urgent action

11. Countries should take urgent measures to avert the ongoing rapid environmental and economic degradation in developing countries that generally affects the lives of women and children in rural areas suffering drought, desertification and deforestation, [wars,] (USA) natural disasters, toxic waste and the aftermath of the use of unsuitable agro-chemical products.

12. In order to reach these goals, women should be fully involved in decision-making and in the implementation of sustainable development activities.

(a) Research, data collection and information dissemination

13. Countries should develop gender-sensitive databases, information systems and participatory action-oriented research and policy analyses with the collaboration of academic institutions and local women researchers on the following:

(a) Women's knowledge and experience of the management and conservation of natural resources for incorporation in the databases and information systems for sustainable development;

(b) The impact of structural adjustment programmes on women. In research done on structural adjustment programmes, special attention should be given to the differential impact on women especially in terms of cut-backs in social services, education and health and in the removal of subsidies on food and fuel;

(c) The impact on women of environmental degradation, particularly drought, desertification, toxic chemicals and [war] (USA);

(d) Analysis of the structural linkages between gender relations, environment and development;

(e) The integration of the value of unpaid work, including work that is currently designated "domestic", in resource accounting mechanisms in order to better represent the true value of women's contribution to the economy, using revised guidelines for the United Nations System of National Accounts, to be issued in 1993;

(f) Measures to develop and include environmental, social and gender impact analyses as an essential step in the development and monitoring of programmes and policies;

(g) Programmes to create rural and urban training, research and resource centres in developing and developed countries that will serve to disseminate environmentally sound technologies to women.

(b) International and regional cooperation and coordination

14. The Secretary-General of the United Nations should review the adequacy of all United Nations institutions, including those with a special focus on the role of women in meeting development and environment objectives, and make recommendations for strengthening their capacities. Institutions which require special attention in this area include the Division for the Advancement of Women, the United Nations Development Fund for Women (UNIFEM), the International Research and Training Institute for the Advancement of Women (INSTRAW) and the women's programmes of regional commissions. The review should consider how the environment and development programmes of each United Nations organization could be strengthened to implement Agenda 21 and how to incorporate the role of women in programmes and decisions related to sustainable development.

15. Each United Nations organization should review the number of women in senior policy-level and decision-making posts and, where appropriate, adopt programmes to increase that number, in accordance with Economic and Social Council resolution 1991/17 on the improvement of the status of women in the Secretariat and the specialized agencies.

16. UNIFEM should establish regular consultations with donors in collaboration with the United Nations Children's Fund (UNICEF), with a view to promoting operational programmes and projects on sustainable development that will strengthen the participation of women, especially low-income women, in sustainable development and in decision-making. UNDP should establish a women's focal point on development and environment in each of its resident representative offices, to provide information and promote exchange of experience and information in these fields. United Nations organizations, Governments and non-governmental organizations involved in the follow-up to the United Nations Conference on Environment and Development and the implementation of Agenda 21 should ensure that gender considerations are fully integrated into all the policies, programmes and activities.

Means of implementation

17. [Finance and cost evaluation

Studies suggest that the actual budgeting process in some countries results in underfunding of activities related to the participation of women in sustainable development. The following action would be necessary:

(a) At the national and international levels, financial policies and programme budgets of Governments, international organizations and aid agencies should be re-oriented and executed to ensure adequate funding for greater gender equity on an annual basis during the period 1993-2000;

(b) There will be a need for allocation of adequate funds by each country to conduct national reviews and prepare reports for the 1995 world conference on women. An average cost of $30,000 is estimated at the national level;

(c) Establishing gender-sensitive national databases and information and research activities would require $250,000 a year for two years on the average for each country, and $10,000 a year thereafter as expenditure for maintenance;

(d) Funding for the United Nations Development Fund for Women (UNIFEM) could be increased by about $10 million to give it enhanced capacity to manage technical cooperation activities. As part of an overall increase in funding for projects targeting issues related to women in sustainable development a strengthened UNIFEM would be able to manage projects in excess of $100 million annually by the year 2000.

18. The Secretary-General's review and production of a report will require additional staffing in the United Nations system for a period of at least two years at a cost not to exceed $2 million.]

## II. CHILDREN AND YOUTH IN SUSTAINABLE DEVELOPMENT

(Section III, chapter 2, of Agenda 21)

19. The present chapter is based on General Assembly resolution 44/228, as well as Preparatory Committee decisions 1/25 on environment and development, 1/28 and 2/6 on cross-sectoral issues and 3/6 on youth in environment and development, in which the Committee recalled the valuable role youth can and should play in the protection of the environment and the promotion of economic and social development. Youth comprise nearly 30 per cent of the world's population. The involvement of today's youth in environment and development decision-making and in the implementation of programmes is critical to the long-term success of Agenda 21.

20. The chapter is also based on General Assembly resolutions 44/59 and 45/103 on policies and programmes involving youth and 45/217, in which the Assembly urged all States and other members of the international community to work for the achievement of the goals and objectives endorsed in the World Declaration on the Survival, Protection and Development of Children. It is also based on General Assembly resolution 45/104 on the Convention on the Rights of the Child and on the resolution entitled "First call for children", adopted by the Paris Conference of Non-Governmental Organizations, convened in December 1991 to prepare for the United Nations Conference on Environment and Development.

### PROGRAMME AREAS

### A. Advancing the role of youth and actively involving them in the protection of the environment and the promotion of economic and social development

Basis for action

21. It is imperative that youth from all parts of the world participate actively in all relevant levels of decision-making processes because it affects their lives today and has implications for their futures. In addition to their intellectual contribution and their ability to mobilize support, they bring unique perspectives that need to be taken into account.

22. Numerous actions and recommendations within the international community have been proposed to ensure that youth are provided a secure and healthy future, including an environment of quality, improved standards of living and access to education and employment. These issues need to be addressed in development planning.

Objectives

23. Each country should, in consultation with its youth communities, establish a process to promote dialogue between the youth community and Government at all levels and to establish mechanisms that permit youth access to information and provide them with the opportunity to present their perspectives on government decisions, including the implementation of Agenda 21.

24. Each country, by the year 2000, should ensure that more than 50 per cent of its youth, gender balanced, are enrolled in or have access to appropriate secondary education or equivalent educational or vocational training programmes by increasing participation and access rates on an annual basis.

25. Each country should undertake initiatives aimed at reducing current levels of youth unemployment, particularly where they are disproportionately high in comparison to the overall unemployment rate.

26. Each country and the United Nations should support the promotion and creation of mechanisms to involve youth representation in all United Nations processes in order to influence those processes.

27. Each country should combat human rights abuses against young people, particularly young women and girls, and should consider providing all youth with legal protection, skills, opportunities and the support necessary for them to fulfil their personal, economic and social aspirations and potentials.

Activities

28. National Governments, according to their strategies, should take measures to:

(a) Establish procedures allowing for consultation and possible participation of youth of both genders, by 1993, in decision-making processes, with regard to the environment, involving youth at the local, national and regional levels;

(b) Promote dialogue with youth organizations regarding the drafting and evaluation of environment plans and programmes or questions on development;

(c) Consider for incorporation into relevant policies the recommendations of international, regional and local youth conferences and other forums that offer youth perspectives on social and economic development and resource management;

(d) Ensure access for all youth to all types of education and, wherever appropriate, providing alternative learning structures; ensure that education reflects the economic and social needs of youth and incorporates the concepts of environmental awareness and sustainable development throughout the curricula; expand vocational training, implementing innovative methods aimed at increasing practical skills, such as environmental scouting;

(e) In cooperation with relevant ministries and organizations, including representatives of youth, develop and implement strategies for creating alternative employment opportunities and provide required training to young men and women;

(f) Establish task forces that include youth and youth non-governmental organizations to develop education and awareness programmes specifically targeted to the youth population on critical issues pertaining to youth. These task forces should use formal and non-formal educational methods to reach a maximum audience. National and local media, non-governmental organizations, businesses and other organizations should assist in these task forces;

(g) Give support to programmes, projects, networks, national organizations and youth non-governmental organizations to examine the integration of programmes in relation to their project requirements, encouraging the involvement of youth in project identification, design, implementation and follow-up;

(h) Include youth representatives in their delegations to international meetings, in accordance with the relevant General Assembly resolutions adopted in 1968, 1977, 1985 and 1989.

29. The United Nations and international organizations with youth programmes, should take measures to:

(a) Review their youth programmes and consider how coordination between them can be enhanced;

(b) Improve the dissemination of relevant information to Governments, youth organizations and other non-governmental organizations on current youth positions and activities; monitor and evaluate the application of Agenda 21;

(c) Promote the United Nations Trust Fund for the International Youth Year and collaborate with youth representatives in the administration of it, focusing particularly on the needs of youth from developing countries.

Means of implementation

[30. Financing and cost evaluation

Financing requirements for most of the activities are included in estimates for other programmes. Annual funding of about $1.5 million will be needed for youth-related activities in the United Nations.]

## B. Children in sustainable development

### Basis for action

31. Children not only will inherit the responsibility of looking after the Earth, but in many developing countries they comprise nearly half the population. Furthermore, children in both developing and industrialized countries are highly vulnerable to the effects of environmental degradation. They are also highly aware supporters of environmental thinking. The specific interests of children need to be taken fully into account in the participatory process on environment and development in order to safeguard the future sustainability of any actions taken to improve the environment.

### Objectives

32. National Governments, according to their policies, should take measures to:

(a) Ensure the survival, protection and development of children, in accordance with the goals endorsed by the 1990 World Summit for Children;

(b) Ensure that the interests of children are taken fully into account in the participatory process for sustainable development and environmental improvement.

### Activities

33. Governments should take active steps to:

(a) Implement programmes for children designed to reach the child-related goals of the 1990s in the areas of environment and development, especially health, nutrition, education, literacy, and poverty alleviation;

(b) Ratify the Convention on the Rights of the Child, at the earliest moment and implement it by addressing the basic needs of youth and children;

(c) Promote primary environmental care (PEC) activities that address the basic needs of communities, improve the environment for children at the household and community level and encourage the participation and empowerment of local populations, including women, youth, children and indigenous people, towards the objective of integrated community management of resources, especially in developing countries;

(d) Expand educational opportunities for children and youth, including education for environmental and developmental responsibility, with overriding attention to the education of the girl child;

(e) Mobilize communities through schools and local health centres so that children and their parents become effective focal points for sensitization of communities to environmental issues;

(f) Establish procedures to incorporate children's concerns into all relevant policies and strategies for environment and development at the local, regional and national levels, including those concerning allocation of and entitlement to natural resources, housing and recreation needs, and control of pollution and toxicity in both rural and urban areas.

34. International and regional organizations should cooperate and coordinate in the proposed areas. The United Nations Children's Fund (UNICEF) should maintain cooperation and collaboration with other organizations of the United Nations, Governments and non-governmental organizations to develop programmes for children and programmes to mobilize children in the actiivies outlined above.

Means of implementation

[(a) Finance and cost evaluation

35. Financing requirements for most of the activities are included in estimates for other programmes.

(b) Human resources development and capacity-building

36. The activities should facilitate capacity-building and training activities already contained in other chapters of Agenda 21.]

## III. RECOGNIZING AND STRENGTHENING THE ROLE OF INDIGENOUS PEOPLE AND THEIR COMMUNITIES

(Section III, chapter 3, of Agenda 21)

### INTRODUCTION

37. The present chapter has been prepared in response to Preparatory Committee decision 3/7, which concerns the involvement of indigenous people and their communities in programmes for sustainable development.

### PROGRAMME AREA

Basis for action

38. Indigenous people and their communities are people who have an historical relationship with their lands and are generally descendants of the original inhabitants of such lands. In the context of this chapter the term "lands" is understood to include the environment of the areas traditionally occupied by the people concerned. Indigenous people and their communities represent a significant percentage of the global population. They have developed over many generations a holistic traditional scientific knowledge of their lands, natural resources and environment. Indigenous people and their communities

shall enjoy the full measure of human rights and fundamental freedoms without hindrance or discrimination. Their ability to participate fully in sustainable development practices on their lands has tended to be limited as a result of factors of an economic, social and historical nature. In view of the interrelationship between the natural environment and its sustainable development and the cultural, social, economic and physical well-being of indigenous people, national and international efforts to implement environmentally sound and sustainable development should recognize, accommodate, promote and strengthen the role of indigenous people and their communities.

39. Some of the goals inherent in the objectives and activities of this programme area are already contained in such international legal instruments as the Indigenous and Tribal Peoples Convention (No. 169) of the International Labour Organisation (ILO) and are being incorporated into the draft universal declaration on indigenous rights, being prepared by the United Nations working group on indigenous populations. The International Year for the World's Indigenous People (1993) presents a timely opportunity to mobilize further international technical and financial cooperation.

Objectives

40. In full partnership with indigenous people and their communities, Governments and, where appropriate, intergovernmental organizations should aim at fulfilling the following objectives:

(a) Establishment of a process to empower indigenous people and their communities through measures that include:

(i) [Adoption or strengthening of appropriate policies and/or legal instruments at the national level]; (France)

(ii) Recognition that the lands of indigenous people and their communities should be protected from activities that are environmentally unsound or that the indigenous people concerned consider to be socially and culturally inappropriate;

(iii) Recognition of their values, traditional knowledge and resource management practices with a view to promoting environmentally sound and sustainable development;

(iv) Recognition that traditional and direct dependence on renewable resources and ecosystems, including sustainable harvesting, continues to be essential to the cultural, economic and physical well-being of indigenous people and their communities;

(v) Development and strengthening of national dispute-resolution arrangements in relation to settlement of land and resource-management concerns;

(vi) Support for alternative environmentally sound means of production to ensure a range of choices on how to improve their quality of life so that they effectively participate in sustainable development;

(vii) Enhancement of capacity-building for indigenous communities, based on the adaptation and exchange of traditional experience, knowledge and resource-management practices, to ensure their sustainable development;

(b) Establishment, where appropriate, of arrangements to strengthen the active participation of indigenous people and their communities in the national formulation of policies, laws and programmes relating to resource management and other development processes that may affect them, and their initiation of proposals for such policies and programmes;

(c) Involvement of indigenous people and their communities at the national and local levels in resource management and conservation strategies and other relevant programmes established to support and review sustainable development strategies, such as those suggested in other programme areas of Agenda 21.

Activities

41. Some indigenous people and their communities may require, in accordance with national legislation, greater control over their lands, self-management of their resources, participation in development decisions affecting them, including, where appropriate, participation in the establishment or management of protected areas. The following are some of the specific measures which Governments could take:

(a) Consider the ratification and application of existing international conventions relevant to indigenous people and their communities (where not yet done), and provide support for the adoption by the General Assembly of a declaration on indigenous rights;

[(b) Adopt or strengthen appropriate policies and/or legal instruments that will protect indigenous intellectual and cultural property and the right to preserve customary and administrative systems and practices.] (France)

42. United Nations organizations and other international development and finance organizations and Governments should, drawing on the active participation of indigenous people and their communities, as appropriate, take the following measures, inter alia, to incorporate their values, views and knowledge, including the unique contribution of indigenous women, in resource management and other policies and programmes that may affect them:

(a) Appoint a special focal point within each international organization, and organize annual interorganizational coordination meetings in consultation with [both Governments and indigenous organizations] (Guatemala) as appropriate, and develop a procedure within and between operational

agencies for assisting Governments in ensuring the coherent and coordinated incorporation of their views in the design and implementation of policies and programmes. Under this procedure, indigenous people and their communities should be informed, consulted and allowed to participate in national decision-making, in particular regarding regional and international cooperative efforts. In addition, these policies and programmes should take fully into account strategies based on local indigenous initiatives;

(b) Provide technical and financial assistance for capacity-building programmes to support the sustainable self-development of indigenous people and their communities;

(c) Strengthen research and education programmes aimed at:

(i) Achieving a better understanding of indigenous people's knowledge and management experience related to the environment, and applying this to contemporary development challenges;

(ii) Increasing the efficiency of indigenous people's resource management systems - for example, by promoting the adaptation and dissemination of suitable technological innovations;

(d) Contribute to the endeavours of indigenous people and their communities in resource management and conservation strategies (such as those that may be developed under appropriate projects funded through the Global Environmental Facility and Tropical Forestry Action Plan) and other programme areas of Agenda 21, including programmes to collect, analyse and use data and other information in support of sustainable development projects.

43. Governments, in full partnership with indigenous people and their communities should, where appropriate:

(a) Develop or strengthen national arrangements to consult with indigenous people and their communities with a view to reflecting their needs and incorporating their values and traditional and other knowledge and practices in national policies and programmes in the field of natural resource management and conservation and other development programmes affecting them;

(b) Cooperate at the regional level, where appropriate, to address common indigenous issues with a view to recognizing and strengthening their participation in sustainable development.

[Means of Implementation

(a) Financing and cost evaluation

44. To implement the above activities, the United Nations system will require about $3 million annually for institutional strengthening.

(b) Legal and administrative frameworks

45. National Governments should incorporate, in collaboration with the indigenous people affected, the rights and responsibilities of indigenous people and their communities in national legal frameworks, including recognition of the need to protect their lands from unsustainable and inequitable development, and secure their access to and control over both their lands and natural resources. Developing countries may require technical assistance to implement these activities, such as in the demarcation of lands.

(c) Human resource development

46. International development agencies and national Governments should commit additional resources to education and training for indigenous people and their communities to develop their capacities to achieve their sustainable self-development, contribute to and participate in sustainable and equitable development at the national level. Particular attention should be given to strengthening the role of indigenous women.]

## IV. STRENGTHENING THE ROLE OF NON-GOVERNMENTAL ORGANIZATIONS: PARTNERS FOR SUSTAINABLE DEVELOPMENT

(Section III, chapter 4, of Agenda 21)

### INTRODUCTION

47. The present chapter has been prepared on the basis of General Assembly resolution 44/228 and Preparatory Committee decision 3/2 on the structure and organization of Agenda 21 (see A/46/48, vol. II, annex I).

### PROGRAMME AREA

Basis for action

48. Non-governmental organizations play a vital role in the shaping and implementation of participatory democracy. Their credibility lies in the responsible and constructive role they play in society. Formal and informal organizations, as well as grass-roots movements, should be recognized as partners in the implementation of Agenda 21. The nature of the independent role played by non-governmental organizations within a society calls for real participation; therefore, independence is a major attribute of non-governmental organizations and is the precondition of real participation.

49. One of the major challenges facing the world community as it seeks to replace unsustainable development patterns with environmentally sound and sustainable development is the need to activate a sense of common purpose on behalf of all sectors of society. The chances of forging such a sense of purpose will depend on the willingness of all sectors to participate in

genuine social partnership and dialogue, while recognizing the independent roles, responsibilities and special capacities of each.

50. Non-governmental organizations, including those non-profit organizations representing groups addressed in the present section of Agenda 21, possess well-established and diverse experience, expertise and capacity in fields which will be of particular importance to the implementation and review of environmentally sound and socially responsible sustainable development, as envisaged throughout Agenda 21. The community of non-governmental organizations, therefore offers a global network which should be tapped, enabled and strengthened in support of efforts to achieve these common goals.

51. To ensure that the full potential contribution of non-governmental organizations is realized, the fullest possible communication and cooperation between international organizations, national and local governments and non-governmental organizations should be promoted in institutions mandated, and programmes designed to carry out Agenda 21. Non-governmental organizations will also need to foster cooperation and communication among themselves to reinforce their effectiveness as actors in the implementation of sustainable development.

Objectives

52. Society, Governments and international bodies should develop mechanisms to allow non-governmental organizations to play their partnership role responsibly and effectively in the process of environmentally sound and sustainable development.

53. With a view to strengthening the role of non-governmental organizations as social partners, the United Nations system and Governments should initiate a process, in consultation with non-governmental organizations, to review formal procedures and mechanisms for the involvement of these organizations at all levels from policy-making and decision-making to implementation.

54. By 1995, a mutually productive dialogue should be established at the national level between all Governments and non-governmental organizations and their self-organized networks to recognize and strengthen their respective roles in implementing environmentally sound and sustainable development.

55. Promote and allow the participation of non-governmental organizations in the conception, establishment and evaluation of official mechanisms and formal procedures designed to review the implementation of Agenda 21 at all levels.

Activities

56. The United Nations system, including international finance and development agencies, and all intergovernmental organizations and forums should, in consultation with non-governmental organizations, take measures to:

(a) Review and report on ways of enhancing existing procedures and mechanisms by which non-governmental organizations contribute to policy design, decision-making, implementation and evaluation at the individual agency level, in inter-agency discussions and in United Nations conferences;

(b) On the basis of subparagraph (a) above, enhance existing or, where they do not exist, establish, mechanisms and procedures within each agency to draw on the expertise and views of non-governmental organizations in policy and programme design, implementation and evaluation;

(c) Review levels of financial and administrative support for non-governmental organizations and the extent and effectiveness of their involvement in project and programme implementation, with a view to augmenting their role as social partners;

(d) Design open and effective means of achieving the participation of non-governmental organizations in the processes established to review and evaluate the implementation of Agenda 21 at all levels;

(e) Promote and allow non-governmental organizations and their self-organized networks to contribute to the review and evaluation of policies and programmes designed to implement Agenda 21, including support for developing country non-governmental organizations and their self-organized networks;

(f) Take into account the findings of non-governmental review systems and evaluation processes in relevant reports of the United Nations Secretary-General to the General Assembly, and of all pertinent United Nations organizations and other intergovernmental organizations and forums concerning implementation of Agenda 21, in accordance with the review process for Agenda 21;

(g) Provide access for non-governmental organizations to accurate and timely data and information to promote the effectiveness of their programmes and activities and their roles in support of sustainable development.

57. Governments should take measures to:

(a) Establish or enhance an existing dialogue with non-governmental organizations and their self-organized networks representing various sectors, which could serve to: (i) consider the rights and responsibilities of these organizations; (ii) efficiently channel integrated non-governmental inputs to the governmental policy development process; and (iii) facilitate non-governmental coordination in implementing national policies at the programme level;

(b) Encourage and enable partnership and dialogue between local non-governmental organizations and local authorities in activities aimed at sustainable development;

(c) Involve non-governmental organizations in national mechanisms or procedures established to carry out Agenda 21, making the best use of their particular capacities, especially in the fields of education, poverty alleviation and environmental protection and rehabilitation;

(d) Take into account the findings of non-governmental monitoring and review mechanisms in the design and evaluation of policies concerning the implementation of Agenda 21 at all levels;

(e) Review government education systems to identify ways to include and expand the involvement of non-governmental organizations in the field of formal and informal education and of public awareness;

(f) Make available and accessible to non-governmental organizations the data and information necessary for their effective contribution to research and to the design, implementation and evaluation of programmes.

[Means of implementation

(a) Financing and cost evaluation

58. Depending on the outcome of review processes and the evolution of views as to how best to build partnership and dialogue between official organizations and groups of non-governmental organizations, relatively limited, but unpredictable, costs will be involved at the international and national levels in enhancing consultative procedures and mechanisms. Non-governmental organizations will also require additional funding in support of their establishment of, improvement of or contributions to Agenda 21 monitoring systems. These costs will be significant but cannot be reliably estimated on the basis of existing information.

(b) Capacity-building

59. The organizations of the United Nations system and other intergovernmental organizations and forums will need to provide increased financial and administrative support for non-governmental organizations and their self-organized networks contributing to the monitoring and evaluation of Agenda 21 programmes, and provide training for non-governmental organizations (and assist them to develop their own training programmes) at the international and regional levels to enhance their partnership role in programme design and implementation. (See Agenda 21, chap. IV, sect. 5 on capacity-building.)

60. Governments will need to promulgate any legislative measures necessary to enable the establishment by non-governmental organizations of consultative groups, and to ensure [the right of non-governmental organizations to protect the public interest through legal action] access by non-governmental organizations with a recognized legal interest to judicial and administrative procedures (USA).]

## V. LOCAL AUTHORITIES INITIATIVES IN SUPPORT OF AGENDA 21

(Section III, chapter 5, of Agenda 21)

### INTRODUCTION

61. The present chapter has been prepared in response to Preparatory Committee decision 3/3 on human settlements, in which the Preparatory Committee called for "stimulation of the locally available intellectual, financial and private-sector potential for human settlements planning and management".

### PROGRAMME AREA

Basis for action

62. Because so many of the problems and solutions being addressed by Agenda 21 have their roots in local activities, the participation and cooperation of local authorities will be a determining factor in fulfilling its objectives. Local authorities construct, operate and maintain economic, social and environmental infrastructure, oversee planning processes, establish local environmental policies and regulations, and assist in implementing national and subnational environmental policies. As the level of governance closest to the people, they play a vital role in educating, mobilizing and responding to the public to promote sustainable development.

Objectives

63. The following objectives are proposed for this programme area:

(a) By 1996, most local authorities in each country should have undertaken a consultative process with their populations and achieved a consensus on "a local Agenda 21" for the community;

(b) By 1993, the international community should have initiated a consultative process aimed at increasing cooperation between local authorities;

(c) By 1994, representatives of associations of cities and other local authorities should have increased levels of cooperation and coordination with the goal of enhancing the exchange of information and experience among local authorities;

(d) All local authorities in each country should be encouraged to implement and monitor programmes which aim at ensuring that women and youth are represented in decision-making, planning and implementation processes.

Activities

64. Each local authority should enter into a dialogue with its citizens, local organizations and private enterprises and adopt a local Agenda 21. Through consultation and consensus-building, local authorities would learn from citizens and from local, civic, community, business and industrial organizations and acquire the information needed for formulating the best strategies. The process of consultation would increase household awareness of sustainable development issues. Local authority programmes, policies, laws and regulations to achieve Agenda 21 objectives would be assessed and modified, based on local programmes adopted. Strategies could also be used in supporting proposals for local, national, regional and international funding.

65. Partnerships should be fostered among relevant organs and organizations such as UNDP, the United Nations Centre for Human Settlements (Habitat) and the United Nations Environment Programme (UNEP), the World Bank, regional banks, the International Union of Local Authorities, the World Association of the Major Metropolises, Summit of Great Cities of the World, the United Towns Organization and other relevant partners, with a view to mobilizing increased international support for local authority programmes. An important goal would be to support, extend and improve existing institutions working in the field of local authority capacity-building and local environment management. For this purpose:

(a) Habitat and other relevant organs and organizations of the United Nations system are called upon to strengthen services in collecting information on strategies of local authorities, in particular for those that need international support;

(b) Periodic consultations involving both international partners and developing countries could review strategies and consider how such international support could best be mobilized. Such a sectoral consultation would complement concurrent country-focused consultations, such as those taking place in consultative groups and round tables.

66. Representatives of associations of local authorities are encouraged to establish processes to increase the exchange of information, experience and mutual technical assistance among local authorities.

[Means of implementation

(a) Financing and cost evaluation

67. Financing for the first activity would be at the local level. In general, donors have not given high priority to funding for urban local authorities and the institutions that these local authorities have themselves established to provide them with training and support. International funding will play a catalytic role and be especially helpful in training, institution-building and in introducing new approaches to solving problems related to urban development and environment. In view of the projected

increase in urban population and the increased proportion of income expected to be generated in urban communities, priority for funding urban programmes should be reassessed. Rather than estimate costs under this programme area the costs have been estimated in other parts of Agenda 21. UNDP and Habitat will need to be strengthened to provide secretariat services for the funding and information exchange functions. These costs are estimated at $1 million annually.

(b) Human resource development and capacity-building

68. This programme should facilitate the capacity-building and training activities already contained in other chapters of Agenda 21.]

## VI. STRENGTHENING THE ROLE OF WORKERS AND THEIR TRADE UNIONS

(Section III, chapter 6, of Agenda 21)

### INTRODUCTION

69. In response to General Assembly resolution 44/228, the present chapter presents measures for strengthening the contribution of workers and their trade unions to environmentally sound and sustainable development.

### PROGRAMME AREA

Basis for action

70. Efforts to implement sustainable development will involve adjustments and opportunities at the national and enterprise level, with workers foremost among those concerned. As their representatives, trade unions are vital actors in facilitating the achievement of sustainable development in view of their experience in addressing industrial change, the extremely high priority they give to protection of the working environment and the related natural environment, and their promotion of socially responsible and economic development. The existing network of collaboration among trade unions, and their extensive membership, provide important channels through which the concepts and practices of sustainable development can be supported. The established principles of tripartism provide a basis for strengthened collaboration between workers and their representatives, Governments and employers in the implementation of sustainable development.

Objectives

71. The overall objective is poverty alleviation and full and sustainable employment, which contribute to safe, clean and healthy environments - the working environment, the community and the physical environment. Workers should be full participants in the implementation and evaluation of activities related to Agenda 21.

72. To that end the following objectives are proposed for accomplishment by the year 2000:

(a) To promote ratification of relevant conventions of ILO and the enactment of legislation in support of those conventions;

(b) To establish bipartite and tripartite mechanisms on safety, health and sustainable development;

(c) To increase the number of environmental collective agreements aimed at achieving sustainable development;

(d) To reduce occupational accidents, injuries and diseases according to recognized statistical reporting procedures;

(e) To increase the provision of workers' education, training and retraining, particularly in the area of occupational health and safety and environment.

Activities

(a) Promote freedom of association

73. For workers and their trade unions to play a full and informed role in support of sustainable development, Governments and employers should promote the rights of individual workers to freedom of association, and the protection of the right to organize as laid down in ILO conventions. Governments should consider ratifying and implementing those conventions, if they have not already done so.

(b) Strengthen participation and consultation

74. Governments, business and industry should promote the active participation of workers and their trade unions in decisions on the design, implementation and evaluation of national and international policies and programmes on environment and development, including employment policies, industrial strategies, labour adjustment programmes and technology transfers.

75. Trade unions, employers and Governments should cooperate to ensure that the concept of sustainable development is equitably implemented.

76. Joint (employer/worker) or tripartite (employer/worker/Government) collaborative mechanisms at the workplace, community and national levels should be established to deal with safety, health and environment, including special reference to the rights and status of women in the workplace.

77. Governments and employers should ensure that workers and their representatives are provided with all relevant information to enable effective participation in these decision-making processes.

78. Trade unions should continue to define, develop and promote policies on all aspects of sustainable development.

79. Trade unions and employers should establish the framework for a joint environmental policy, and set priorities to improve the working environment and the overall environmental performance of enterprise.

80. Trade unions should:

(a) Seek to ensure that workers are able to participate in environmental audits at the workplace and in environmental impact assessments;

(b) Participate in environment and development activities within the local community and promote joint action on potential problems of common concern;

(c) Play an active role in the sustainable development activities of international and regional organizations, particularly within the United Nations system.

(c) Provide adequate training

81. Workers and their representatives should have access to adequate training to augment environmental awareness, ensure their safety and health, and improve their economic and social welfare. Such training should ensure that the necessary skills are available to promote sustainable livelihoods and improve the working environment. Trade unions, employers, Governments and international agencies should cooperate in assessing training needs within their respective spheres of activity. Workers and their representatives should be involved in the design and implementation of worker training programmes conducted by employers and Governments.

[Means of implementation

(a) Financial and cost evaluation

82. Given the need to catalyse and support expanded activities in developing countries in support of freedom of association, expanded trade union participation, improvements in the working environment, and increased environment and development training for workers, approximately $300 million per year in international financing (at $3 million per country) will be required as an initial step. For the ILO to play an extended role in supporting these activities, additional resources of approximately $4.0 million per year will be required.

83. It should be emphasized that these "costs" would in all likelihood lead to even more significant financial benefits.

(b) Capacity-building

84. Particular attention should be given to strengthening the capacity of each of the tripartite social partners (Governments, and employers' and workers' organizations) to facilitate greater collaboration towards sustainable development.]

## VII. STRENGTHENING THE ROLE OF BUSINESS AND INDUSTRY

(Section III, chapter 7, of Agenda 21)

85. Business and industry, including transnational corporations, play a crucial role in the social and economic development of a country. A stable policy regime enables and encourages business and industry to operate responsibly and efficiently and to implement longer-term policies. Increasing prosperity, a major goal of the development process, is contributed primarily by the activities of business and industry. Business enterprises, large and small, formal and informal, provide major trading, employment and livelihood opportunities. Business opportunities available to women are contributing towards their professional development, strengthening their economic role and transforming social systems. Business and industry, including transnational corporations and their representative organizations, should be full participants in the implementation and evaluation of activities related to Agenda 21.

86. Through more efficient production processes, preventive strategies, cleaner production technologies and procedures throughout the product life cycle, hence minimizing or avoiding wastes, the policies and operations of business and industry, including transnational corporations, can play a major role in reducing impacts on resource use and the environment. Technological innovations, development, applications, transfer and the more comprehensive aspects of partnership and cooperation are to a very large extent within the province of business and industry.

87. Business and industry, including transnational corporations, should recognize environmental management as among the highest corporate priorities and as a key determinant to sustainable development. Some enlightened leaders of enterprises are already implementing "responsible care" and product stewardship policies and programmes, fostering openness and dialogue with employees and the public and carrying out environmental audits and assessments of compliance. These leaders in business and industry, including transnational corporations, are increasingly taking voluntary initiatives, promoting and implementing self-regulations and greater responsibilities in ensuring their activities have minimal impacts on human health and the environment. The regulatory regimes introduced in many countries, the growing consciousness of consumers and the general public and enlightened leaders of business and industry, including transnational corporations, have all contributed to this. A positive contribution of business and industry, including transnational corporations, to sustainable development can

increasingly be achieved by using economic instruments such as free market mechanisms in which the prices of goods and services should increasingly reflect the environmental costs of their input, production, use, recycling and disposal subject to country-specific conditions.

88. Improving production systems through technologies and processes that utilize resources more efficiently and at the same time produce less wastes - achieving more with less - are important pathways towards sustainability for business and industry. Similarly, facilitating and encouraging inventiveness, competitiveness and voluntary initiatives are necessary for stimulating more varied, efficient and effective options. To address these major requirements and strengthen further the role of business and industry, including transnational corporations, the following two programmes are proposed.

## PROGRAMME AREAS

### A. Promoting cleaner production

Basis for action

89. There is increasing recognition that production, technology and management that inefficiently use resources, form residues that are not reused, discharge wastes that have adverse impacts on human health and the environment and manufacture products that when used have further impacts and are difficult to recycle, need to be replaced with technologies, good engineering and management practices and know-how that would minimize waste throughout the product life cycle. The concept of cleaner production implies striving for optimal efficiencies at every stage of the product life cycle. A result would be the improvement of the overall competitiveness of the enterprise. The need for a transition towards cleaner production policies was recognized at the UNIDO-organized Ministerial-level Conference on Ecologically Sustainable Development, held at Copenhagen in October 1991.

Objectives

90. Increase the efficiency of resource utilization, including increasing the reuse and recycling of residues, and reduce the quantity of waste discharge per unit of economic output.

Activities

91. Governments, business and industry, including transnational corporations, should strengthen partnerships to implement the principles and criteria for sustainable development.

92. Governments should identify and implement an appropriate mix of economic instruments and normative measures such as laws, legislations and standards, in consultation with business and industry, including transnational corporations, that will promote the use of cleaner production, with special

consideration for small and medium-sized enterprises. Voluntary private initiatives should also be encouraged.

93. Governments, business and industry, including transnational corporations, academia and international organizations, should work towards the development and implementation of concepts and methodologies for the internalization of environmental costs into accounting and pricing mechanisms.

94. Business and industry, including transnational corporations, should be encouraged:

(a) To report annually on their environmental records, as well as on their use of energy and natural resources;

(b) To adopt and report on the implementation of codes of conduct promoting best environmental practice, such as the International Chamber of Commerce's Business Charter on Sustainable Development and the chemical industry's responsible care initiative.

95. Governments should promote technological and know-how cooperation, encompassing identification, assessment, research and development, management marketing and application of cleaner production between enterprises.

96. Industry should incorporate cleaner production policies in its operations and investments, taking also into account its influence on suppliers and consumers.

97. Industry and business associations should cooperate with workers and trade unions to continuously improve the knowledge and skills for implementing sustainable development operations.

98. Industry and business associations should encourage individual companies to undertake programmes for improved environmental awareness and responsibility at all levels to make these enterprises dedicated to the task of improving environmental performance based on internationally accepted management practices.

99. International organizations should increase education, training and awareness activities relating to cleaner production, in collaboration with industry, academia and relevant national and local authorities.

100. International and non-governmental organizations, including trade and scientific associations, should strengthen cleaner production information dissemination by expanding existing databases such as UNEP's ICPIC, UNIDO's INTIB, and the ICC/IEB, as well as forge networking of national and international information systems.

[Means of implementation

Financial and cost evaluation

101. Although the investments for cleaner production will yield benefits for the enterprise, the costs involved could not be estimated [because of the evolving goal towards cleaner and cleaner production with improvements in technology and experience; the wide differences in operations among business and industry; and the range of options that could be considered for promoting cleaner production] (CANZ).

102. The implementation of cleaner production policies helps an enterprise to use resources more efficiently and discharge less wastes needing to be treated, hence accruing benefits for the enterprise [, thus it is expected that the major portion of the costs would be borne by the enterprise. The use of appropriate regulatory measures and economic instruments by Governments will help facilitate the speedier transition towards cleaner production] (CANZ).

## B. Promoting responsible entrepreneurship

### Basis for action

103. Entrepreneurship is one of the most important driving forces for innovations, increasing market efficiencies and responding to challenges and opportunities. Small and medium-sized entrepreneurs, in particular, play a very important role in the social and economic development of a country. Often, they are the major means for rural development, increasing off-farm employment and providing the transitional means for improving the livelihoods of women. Responsible entrepreneurship can play a major role in improving the efficiency of resource use, reducing risks and hazards, minimizing wastes and safeguarding environmental qualities.

### Objectives

104. The following objectives are proposed:

(a) To encourage the concept of stewardship in the management and utilization of natural resources by entrepreneurs;

(b) To increase the number of entrepreneurs engaged in enterprises that subscribe to and implement sustainable development policies.

### Activities

105. Governments should encourage the establishment and operations of sustainably managed enterprises. The mix would include regulatory measures, economic incentives and streamlining of administrative procedures to assure maximum efficiency in dealing with applications for approval, in order to

facilitate investment decisions, advice and assistance with information, infrastructural support and stewardship responsibilities.

106. Governments should encourage, in cooperation with the private sector, the establishment of venture capital funds for sustainable development projects and programmes.

107. In collaboration with business, industry, academia and international organizations, Governments should support training in the environmental aspects of enterprise management. Attention should also be directed towards apprenticeship schemes for youth.

108. Business and industry, including transnational corporations, should be encouraged to establish worldwide corporate policies on sustainable development, arrange for environmentally sound technologies to be available to affiliates in developing countries [without extra external charges] (Japan), encourage overseas affiliates to modify procedures in order to reflect local ecological conditions and share experiences with local authorities, national Governments and international organizations.

109. Large business and industry including transnational corporations should consider establishing partnership schemes with small and medium-sized enterprises to help facilitate the exchange of experience in managerial skills, market development and technological know-how, where appropriate, with the assistance of international organizations.

110. Business and industry should establish national councils for sustainable development and help promote entrepreneurship in the formal and informal sectors. The inclusion of women entrepreneurs should be facilitated.

111. Business and industry, including transnational corporations, should increase research and development of environmentally sound technologies and environmental management systems, in collaboration with academia and the scientific/engineering establishments, drawing upon indigenous knowledge, where appropriate.

112. Business and industry, including transnational corporations, should ensure responsible and ethical management of products and processes from the point of view of health, safety and environmental aspects. Towards this end, business and industry should increase self-regulation, guided by appropriate codes, charters and initiatives integrated into all elements of business planning and decision-making, and fostering openness and dialogue with employees and the public.

113. Multilateral and bilateral financial aid institutions should continue to encourage and support small- and medium-scale entrepreneurs engaged in sustainable development activities.

114. United Nations organizations and agencies should improve mechanisms for business and industry inputs, policy and strategy formulation processes, to ensure that environmental aspects are strengthened in foreign investment.

115. International organizations should increase support for research and development on improving the technological and managerial requirements for sustainable development, in particular for small and medium-sized enterprises in developing countries.

[Means of implementation

Financing and cost evaluation

Alternative A:

116. It is not possible to estimate the costs that might be incurred at the micro-economic level in global economies from implementing the various measures outlined in this programme. However, some changes may simply amount to changes in the orientation of existing activities and additional costs for Governments and international organizations may not be significant. These costs are also included in other areas. (CANZ)

Alternative B:

116. The activities included under this programme area are mostly changes in the orientation of existing activities and additional costs are not expected to be significant. The cost of activities by Governments and international organizations are already included in other programme areas.]

## VIII. THE SCIENTIFIC AND TECHNOLOGICAL COMMUNITY

(Section III, chapter 8, of Agenda 21)

117. The present chapter was prepared as further development of document A/CONF.151/PC/52. This chapter focuses on how to enable the scientific and technological community, which includes, among others, engineers, architects, industrial designers, urban planners and other professionals and policy makers, to make a more open and effective contribution to the decision-making processes concerning environment and development. It is important that the role of science and technology in human affairs be more widely known and better understood, both by decision makers who help determine public policy and by the general public. The cooperative relationship existing among the scientific and technological community and the general public should be extended and deepened into a full partnership. Improved communication and cooperation between the scientific and technological community and decision makers will facilitate greater use of scientific and technical information and knowledge in policies and programme implementation. Decision makers should create more favourable conditions for improving training and independent research in sustainable development. Existing multidisciplinary approaches will have to be strengthened and more interdisciplinary studies developed between the scientific and technological community and policy makers, and with the general public to provide leadership and practical know-how to the concept of sustainable development. The public should be assisted in communicating

their sentiments to the scientific and technological community concerning how science and technology might be better managed to affect their lives in a beneficial way. By the same token, the independence of the scientific and technological community to investigate and publish without restriction and to exchange their findings freely must be assured. The adoption and implementation of ethical principles and codes of practice for the scientific and technological community that are internationally accepted could enhance professionalism and may improve and hasten recognition of the value of its contributions to environment and development, recognizing the continuing evolution and uncertainty of scientific knowledge.

## PROGRAMME AREAS

### A. Improving communication and cooperation between the scientific and technological community and decision makers and the public

Basis for action

118. The scientific and technological community and policy makers should increase their interaction in order to implement strategies for sustainable development on the basis of the best available knowledge. This implies that decision makers should provide the necessary framework for rigorous research and for full and open communication of the findings of the scientific and technological community, and develop with it ways in which research results and the concerns stemming from the findings can be communicated to decision-making bodies so as to better link scientific and technical knowledge with strategic policy and programme formulation. At the same time, this dialogue would assist the scientific and technological community in developing priorities for research and proposing actions for constructive solutions.

Objectives

119. The following objectives are proposed:

(a) To extend and open up the decision-making process and broaden the range of developmental and environmental issues where cooperation at all levels between the scientific and technological community and decision makers can take place;

(b) To improve the exchange of knowledge and concerns between the scientific and technological community and the general public, to enable policies and programmes to be better formulated, understood and supported.

Activities

120. Governments should undertake the following activities:

(a) To review how national scientific and technological activities could be more responsive to sustainable development needs as part of an overall effort to strengthen national research and development systems, including through strengthening and widening the membership of national scientific and technological advisory councils, organizations and committees to assure that:

(i) The full range of national needs for scientific and technological programmes are communicated to Governments and the public;

(ii) The various strands of public opinion are represented;

(b) To promote regional cooperative mechanisms to address regional needs for sustainable development. Such regional cooperative mechanisms could be facilitated through public/private partnerships and provide support to Governments, industry, non-governmental educational institutions and other domestic and international organizations, and by strengthening global professional networks;

(c) To improve and expand scientific and technical inputs through appropriate mechanisms to intergovernmental consultative, cooperative and negotiating processes towards international and regional agreements;

(d) To strengthen science and technology advice to the highest levels of the United Nations, and other international institutions, in order to ensure the inclusion of science and technology know-how in sustainable development policies and strategies;

(e) To improve and strengthen programmes for disseminating research results of universities and research institutions. This requires recognition of and greater support to the scientists, technologists and teachers who are engaged in communicating and interpreting scientific and technological information to policy makers, professionals in other fields and the general public. Such support should focus on the transfer of skills and the transfer and adaptation of planning techniques. This requires full and open sharing of data and information among scientists and decision makers. The publication of national scientific research reports and technical reports that are understandable and relevant to local sustainable development needs would also improve the interface between science and decision-making, as well as the implementation of scientific results;

(f) To improve links between the official independent research sector and industry so that research may become an important element of industrial strategy;

(g) To promote and strengthen the role of women as full partners in the science and technology disciplines;

(h) To develop and implement information technologies to enhance the dissemination of information for sustainable development.

[Means of implementation

(a) Financing and cost evaluation

121. Between $10 million and $15 million of international financing per year will be needed.

(b) Capacity-building

122. Intergovernmental panels on development and environmental issues should be organized, with emphasis on their scientific and technical aspects, and studies of responsiveness and adaptability in subsequent programmes of action[, drawing upon the experience of the Intergovernmental Panel on Climate Change.] (USA)

## B. Promoting codes of practice and guidelines related to science and technology

### Basis for action

123. Scientists and technologists have a special set of responsibilities which belong to them both as inheritors of a tradition and as professionals and members of disciplines devoted to the search for knowledge and to the need to protect the biosphere in the context of sustainable development.

124. Increased ethical awareness in environmental and developmental decision-making should help to place appropriate priorities for the maintenance and enhancement of life-support systems for their own sake, and in so doing ensure that the functioning of viable natural processes is properly valued by present and future societies. Therefore, a strengthening of the codes of practice and guidelines for the scientific and technological community would increase environmental awareness and contribute to sustainable development. It would build up the level of esteem and regard for the scientific and technological community and facilitate the "accountability" of science and technology.

### Objectives

125. The objective should be to develop, improve and promote international acceptance of codes of practice and guidelines relating to science and technology in which the integrity of life-support systems is comprehensively accounted for and where the important role of science and technology in reconciling the needs of environment and development is accepted. To be effective in the decision-making process, such principles, codes of practice and guidelines must not only be agreed upon by the scientific and technological community, but also recognized by the society as a whole.

Activities

126. The following activities could be undertaken:

(a) To strengthen national and international cooperation, including the non-governmental sector, to develop codes of practice and guidelines regarding environmentally sound and sustainable development, taking into account the Earth Charter and existing codes of practice and guidelines;

(b) To strengthen and establish national advisory groups on environmental and developmental ethics, in order to develop a common value framework between the scientific and technological community and society as a whole, and promote continuous dialogue;

(c) To extend education and training in developmental and environmental ethical issues to integrate such objectives into education curricula and research priorities;

(d) To review and amend relevant national and international environment and development legal instruments to ensure appropriate codes of practice and guidelines are incorporated into such regulatory machinery.

Means of implementation

(a) Financing and cost evaluation

127. About $5 million of international financing per year over the period 1993-2000 will be needed.

(b) Capacity-building

[128. International agreements should be negotiated and reached on appropriate ethical principles, codes of practice and guidelines for the scientific and technological community in the pursuit of its research activities and implementation of programmes aimed at sustainable development. UNESCO might take the lead in implementing the above-mentioned activities, with the collaboration of other United Nations agencies and intergovernmental and non-governmental organizations.] (USA - delete paragraph)

## IX. STRENGTHENING THE ROLE OF FARMERS

(Section, III, chapter 9, of Agenda 21)

129. All references in this chapter to "farmers" and "farming" include all rural people who derive their livelihood from activities such as farming, fishing and forest harvesting.

Basis for action

130. Agriculture occupies one third of the land surface of the Earth, and is the central activity for much of the world's population. Rural activities take place in close contact with nature, adding value to it by producing renewable resources, while at the same time, becoming vulnerable to overexploitation and improper management.

131. The rural household, indigenous people and their communities, and the family farmer, a substantial number of whom are women, have been the stewards of much of the Earth's resources. Farmers must conserve their physical environment as they depend on it for their sustenance. Over the past 20 years there has been impressive increase in aggregate agricultural production. Yet, in some regions, this increase has been outstripped by population growth or international debt or falling commodity prices. Further, the natural resources that sustain farming activity need proper care, and there is a growing concern about the sustainability of agricultural production systems.

132. A farmer-centred approach is the key to the attainment of sustainability in both developed and developing countries and many of the programme areas in Agenda 21 address this objective. A significant number of the rural population in developing countries depend primarily upon small-scale, subsistence-oriented agriculture based on family labour. However, they have limited access to resources, technology, alternative livelihood and means of production. As a result, they are engaged in the overexploitation of natural resources, including marginal lands.

133. The sustainable development of people in marginal and fragile ecosystems is also addressed in Agenda 21. The key to the successful implementation of these programmes lies in the motivation and attitudes of individual farmers and government policies that would provide incentives to farmers to manage their natural resources efficiently and in a sustainable way. Farmers, particularly women, face a high degree of economic, legal and institutional uncertainties when investing in their land and other resources. The decentralization of decision-making towards local and community organizations is the key in changing people's behaviour and implementing sustainable farming strategies. This programme area deals with activities which can contribute to this end.

Objectives

134. The following objectives are proposed:

(a) To encourage a decentralized decision-making process through the creation and strengthening of local and village organizations that would delegate power and responsibility to primary users of natural resources;

(b) To support and enhance the legal capacity of women and vulnerable groups with regard to access, use and tenure of land;

(c) To promote and encourage sustainable farming practices and technologies;

(d) To introduce or strengthen policies that would encourage self-sufficiency in low-input and low-energy technologies, including indigenous practices, and pricing mechanisms that internalize environmental costs;

(e) To develop a policy framework that provides incentives and motivation among farmers for sustainable and efficient farming practices;

(f) To enhance the participation of farmers, men and women, in the design and implementation of policies directed towards these ends, through their representative organizations.

Activities

(a) Management-related activities

135. National Governments should:

(a) Ensure the implementation of the programmes on sustainable livelihoods, agriculture and rural development, managing fragile ecosystems, water use in agriculture, and integrated management of natural resources;

(b) Promote pricing mechanisms, trade policies, fiscal incentives and other policy instruments that positively affect individual farmer's decisions about an efficient and sustainable use of natural resources, and take full account of the impact of these decisions on households, food security, farm incomes, employment and the environment;

(c) Involve farmers, and their representative organizations, in the formulation of policy;

(d) Protect, recognize and formalize women's access to tenure and use of land, as well as rights to land, access to credit, technology, inputs and training;

(e) Support the formation of farmers' organizations by providing adequate legal and social conditions.

136. Support for farmers' organizations could be arranged as follows:

(a) National and international research centres should cooperate with farmers' organizations in developing location-specific environment-friendly farming techniques;

(b) National Governments, multilateral and bilateral development agencies and non-governmental organizations should collaborate with farmers'

organizations in forumlating agricultural development projects to specific agro-ecological zones.

(b) Data and information

137. Governments and farmers' organizations should:

(a) Initiate mechanisms to document, synthesize and disseminate local knowledge, practices and project experiences so that they will make use of the lessons of the past when formulating and implementing policies affecting farming, forest and fishing population;

(b) Establish networks for the exchange of experiences with regard to farming that help to conserve land, water and forest resources, minimize the use of chemicals and reduce or reutilize farm wastes;

(c) Develop pilot projects and extension services that would seek to build on the needs and knowledge base of women farmers.

(c) International and regional cooperation

138. FAO, IFAD, WFP, the World Bank, the regional development banks and other international organizations involved in rural development should involve farmers and their representatives in their deliberations, as appropriate.

139. Representative organizations of farmers should establish programmes for the development and support of farmers' organizations, particularly in developing countries.

[Means of implementation

(a) Financing and cost evaluation

140. The financing needed for this programme area is estimated in sustainable agricultural and rural development, particularly in the programme area entitled "Ensuring people's participation and promoting human resource development". The cost shown under the chapters on sustainable mountain development, combating desertification and drought, and combating poverty and meeting basic needs are also relevant for this programme area (see A/CONF.151/PC/100/Add.2, 17, 18 and 19).

(b) Scientific and technological means

141. National Governments and appropriate international organizations, in collaboration with national research organizations (EC) and non-governmental organizations, should:

(a) Develop farming technologies that enhance sustainable (EC) crop yields and profitability [intensity] (USA)/ crop intensity (EC), maintain land quality, recycle nutrients, conserve water and energy and control pests and weeds (EC);

(b) Conduct studies of high-input and low-input agriculture to compare their productivity and sustainability. The research should be conducted under various environmental and sociological settings;

(c) Support research on mechanization that would optimize human labour and animal power and hand-held and animal-drawn equipment that can be easily operated and maintained. The development of farm technologies should take into account farmers' available resources and the role of animals to farming households and the ecology.

(c) Human resource development

142. National Governments, with the support of multilateral and bilateral development agencies and scientific organizations, should develop curricula for agricultural, forestry and fishing (CANZ) colleges and training institutions that would integrate ecology into agricultural, forestry and fishing science. Interdisciplinary programmes in agricultural, forestry and fishing ecology are essential to the training of a new generation of agricultural forestry and fishing scientists and field-level extension agents.

(d) Capacity-building

143. National Governments should:

(a) Create the institutional and legal mechanisms to give effective land tenure to farmers [who demonstrate they are conserving and utilizing resources properly] (USA)/ farmers with a view to conserving and utilizing resources properly (EC)/ to forest harvesting and fishing rights to those who are working towards sustainable management of resources (CANZ). The absence of legislation indicating land and fishing rights has been an obstacle in taking action against land degradation in many farming communities in developing countries;

Alternate (b) Strengthen rural institutions that would enhance sustainability through locally managed credit systems and technical assistance, small facilties for producing inputs, appropriate equipment and small-scale processing units, and marketing and distribution systems; (CANZ)

(b) Strengthen farmer institutions that would enhance locally managed credit systems, small facilities for producing agricultural inputs, small-scale processing units (EC) and agricultural equipment, and marketing and distribution (EC) systems;

(c) Establish mechanisms to increase women and indigenous groups' [farmers'] (CANZ) access to agricultural, forestry and fishing training, credit (CANZ) and use of improved appropriate [farming] (CANZ) technology for ensuring food security.]

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